Will Smitas

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EDUCATION

Brown University 4.0 GPA

Sc.B. in Computer Science and Mathematics *Expected Graduation May 2029*

- Relevant Coursework**:** Data Structures and Algorithms, Statistics & Probability, Partial Differential Equations, Abstract Algebra, Machine Learning

University at Albany 4.0 GPA

Concurrent enrollment with high school *Fall 2022 – Fall 2024*

- Relevant Coursework: Complex Analysis, Basic Analysis, Linear Algebra, Multivariable Calculus

COMPETITIONS

First Place - Jane Street Mystery Planet *July 2026*

- Won first place among all competitors for an in-person competition at Jane Street's New York City office.
- Competition involved solving complex mathematical problems, along with the design and development of trading strategies.

EXPERIENCE

Wind River Advisory - Software Engineer Intern *August 2026 – Present*

- Developing custom AI tooling using Python and Ollam API for 20+ small businesses and their marketing teams.
- Presented an analysis to business owners on prompting techniques and benchmarks for OpenAI and Anthropic LLMs.

RESEARCH

Millennium Research - Research Assistant *June 2026 – July 2026*

- Audited Lean 4/Mathlib formalizations against natural-language mathematical statements for a large-scale autoformalization dataset, verifying logical faithfulness across combinatorics, algebra, analysis, and number theory.
- Identified subtle semantic gaps between the natural mathematical language and formal code, which include missing domain restrictions, weakened existential quantifiers, and unstated type generalizations.
- Performed clause-by-clause verification requiring fluency across many advanced subfields of mathematics to determine faithfulness of formal statements to natural language.

University at Albany - Undergraduate Research Assistant Albany, NY | December 2024 – May 2025

- Investigated a potential link between group representation theory and Diophantine analysis.
- Designed Python programs to compute 50,000+ integer solutions for multivariable polynomials and analyze the properties of and patterns within those solutions.
- Created a poster summarizing research and presented it about 20 times to UAlbany community members

EXTRACURRICULARS

Brown University - Prediction Market High Frequency Trading *March 2026 – Present*

- Led development of automated Kalshi trading, written in Go and Python, deployed on AWS EC2
- Trained machine learning models on Brown University's supercomputer, Oscar
- Developed framework in Go for distributed market data to parallelize market trade streams, divided over web sockets and HTTP polling
- Scraped millisecond latent crypto data from Coinbase, Kalshi, Polymarket

Quantitative Trading at Brown - Monte Carlo Equities Simulation *October 2025 – Present*

- Built a Monte Carlo simulation engine in Python (NumPy) modeling Geometric Brownian Motion to generate thousands of future stock price paths.
- Derived empirical CDF from simulated outcomes to estimate the probability of a stock falling below a given price threshold.
- Validated simulation accuracy by benchmarking results against the Black-Scholes closed-form model.
- Visualized price path distributions and CDF outputs using Matplotlib.

Brown University Athletics - Collegiate Athlete (XC & Track) *August 2025 – Present*

- Balance a rigorous academic schedule with a 20-hour weekly commitment to Division I athletic training and competition.

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, TypeScript, SQL, HTML, CSS, Go, LaTeX, Lean4/Mathlib, R

Frameworks & Tools: Numpy, Pandas, Figma, Excel, PostgreSQL, MySQL, SQLite, Git, Github, Supabase, Vercel, Railway